

3430 Evaluation

October 3, 1978

Colville Ranger District Campground Evaluation

Forest Supervisor, Colville NF

On September 15, David R. Bridgwater, Entomologist, and Gregory M. Filip, Pathologist, visited three campgrounds on the Colville Ranger District, Colville National Forest. The purpose of the visit was to inspect the campgrounds for hazardous trees and give recommendations for future management of the campgrounds with regard to hazards caused by insects and diseases. They were accompanied by Chip Cartwright, from District.

The first campground (Thomas) they visited contained primarily 50-year-old western larch with some subalpine fir. Cartwright said many trees that had severe heartrot with thin shells of sound wood remaining had been removed. The stand remained fairly dense even after removal of defective trees. No other disease or insect problems were noted in the campground.

It is recommended that the campground be periodically examined for heartrots by using an increment borer or electric drill to determine the thickness of sound wood. Detailed examination by coring or drilling would have to be done at approximately five year intervals. However the trees should be visually examined each year. Trees with living shell thicknesses below those in the following table have a high potential for failure and should be treated.

<u>Tree</u> <u>DBH (in)</u>	<u>Minimum</u> <u>Living Shell</u> <u>Thickness (in)</u>	<u>Tree</u> <u>DBH (in)</u>	<u>Minimum</u> <u>Living Shell</u> <u>Thickness (in)</u>
4	1.0	24	3.5
8	1.5	28	4.0
12	2.0	32	4.5
16	2.5	36	5.5
20	3.0	40	6.0

Decay fungi commonly enter living trees through wounds and cause decay. Thin-barked, non-resinous species such as true firs are more prone to decay than thick-barked, resinous species. Susceptibility to heartrot increases as trees age.

Most heartrots compartmentalize, meaning that the diameter of the decay column never exceeds the diameter of the tree at the time of tree wounding (infection). However, decay caused by *Phellinus* (*Fomes*) *pini*, a common decay fungus that infects larch, may not compartmentalize but continue to decay sound wood formed after tree wounding. Several root and butt rotting fungi may also cause decay in the stems of larch, and these include *Fomes annosus* and *Polyporus schweinitzii*. Stumps created by tree removal should be immediately sprinkled with borax to prevent infection by *Fomes annosus*.

As the stand matures, heartrots will continue to increase and additional trees will have to be treated. The present stand is still young enough that, if regeneration is begun early, trees should be of suitable campground size before the original stand is completely removed. Increasing the vigor of the original stand may also compensate for heartrot losses as trees add new layers of sound stemwood around decayed heartwood.

The second campground (Gillette) they visited was in a stand composed primarily of 30-50 year-old lodgepole pine. There were no disease problems noted in the campground. Lodgepole pine is not prone to heartrots and tends to be relatively sound even after severe wounding. Clumps of aspen were observed in the campground. Almost every tree had been carved upon with a knife. Aspen is non-resinous and thin-barked and thus is subject to excessive decay when wounded. Living shell thicknesses should be periodically measured in wounded aspen. Trees with thin shells of sound wood should be treated if they do not meet the suggested thickness listed in the previously displayed table.

The third campground (Lake Leo) that they visited was located in a stand composed primarily of lodgepole pine with some larch age 50 years. No serious diseases were observed in the lodgepole. Some of the larch had butt rot as noted in several freshly cut stumps. Heartrots may also be present. As in the first campground, living shell thicknesses should be periodically measured and hazardous trees treated.

No serious insect infestations were found at any of the three campgrounds. A bark maggot was causing pitch globs on many of the lodgepole pine in all three areas, but this insect should not cause any problems.

Mountain pine beetle infestations develop in lodgepole pine stands that are over 90 years old and average 8 inches dbh and larger. A program of removing lodgepole as they approach this condition will greatly reduce losses to mountain pine beetle and favor the growth of younger lodgepole pine.

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